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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,824

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Jialin Wu

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7398

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07/07/2010

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EXAMINER

DESAI, RITA J

ART UNIT

PAPER NUMBER

1625

NOTIFICATION DATE

DELIVERY MODE

07/07/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@wavsip.com

Office Action Summary	Application No. 10/559,824	Applicant(s) WU ET AL.	
	Examiner Rita J. Desai	Art Unit 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) 77-79, 83, 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-11,14,16-24,27,28,37,38,40-51,61-64,67,68 and 76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/20/09, 2/27/09</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1,3-5,7-11,14,16-24,27,28,37,38,40-51,61-64,67,68,76-79,83 and 84.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of group IV in the reply filed on 4/30/10 is acknowledged.

It is unclear of the species election as there is no compound 59 in example 88. The examiner is not giving a non-responsive as there are similar phenyl-propyl β carboline -3-carboxylate.

However clarification is required.

The group IV elected by the applicant has been further restricted to include only the compounds wherein X is absent, i.e. when R5 is H as X and R5 cannot co-exist.

So the elected group is given by

X is absent, R1 is H or Linear or branched alkyl, R2 is selected from carboxy, ester group, carboxalate, acylamino and linear or branched C1-6 alkoxy carbonyl, R3 is h, hydroxyl, linear or branched C1-C6 alkoxy and carboxylic esters, R4 is selected from the group consisting of C6-10 arylalkyl, mono- or multi-substituted C6-10 arylalkyl, wherein the substituents are defined to be halogen, C1-4 linear or branched alkyl, C1-4 linear or branched alkoxy, nitro, amino, hydroxyl and carboxyl; R5 is hydrogen and X is absent as R5 and X do not co-exist.

The claims readable on the elected species are claims 1, 3-5, 7-11, 14, 16-24, 37, 38, 40-45, 61-64, 67, 68, 76-79, 83 and 84.

(Claims 1, 3-5, 8-11, 14, 16-24, 37, 38, 40-45, 61-64, 67, 68, 76-79, 83 and 84 for the specific compound 59). Claims 1, 37, 76, 77 and 84 are generic.

Claims 77, 78, 83 and 84 are drawn to group XI, a method of treating. (applicants have left them in a non-statutory use form.) are held withdrawn.

Group XII would include compounds wherein R5 is absent and X is present, Wherein R1 is H or Linear or branched alkyl, R2 is selected from carboxy, ester group, carboxalate, acylamino and linear or branched C1-6 alkoxy carbonyl, R3 is h, hydroxyl, linear or branched C1-C6 alkoxy and carboxylic esters, R4 is selected from the group consisting of C6-10 arylalkyl, mono- or multi-substituted C6-10 arylalkyl, wherein the substituents are defined to be halogen, C1-4 linear or branched alkyl, C1-4 linear or branched alkoxy, nitro, amino, hydroxyl and carboxyl;

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Claim Rejections - 35 USC § 102

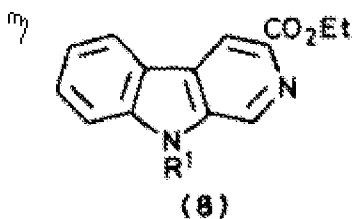
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

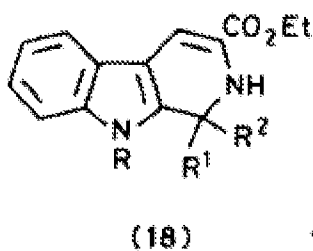
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 7-11, 16-24, 38, 43-51, 61,62, 76 are rejected under 35 U.S.C. 102(b) as being anticipated by Moody Christopher et al .

The reference discloses the carboxalates wherein R¹ is CH₂Phenyl in formula 8.



where R¹ = CH₂Ph

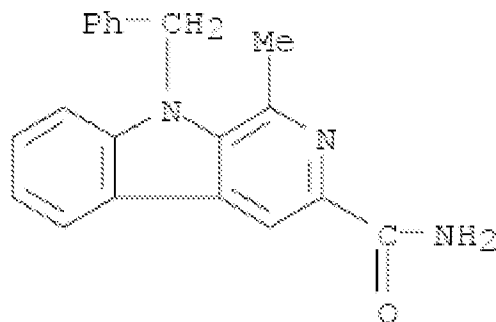


(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 7-11, 14, 16-24, 37, 38, 40-51, 61-64, 67, 68, 76 are rejected under 35 U.S.C. 102(b) as being anticipated by BE 612725 Fredrick Leonard .

The reference discloses compounds of the formula

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These compounds read on compounds when R2 is an acylamine, R1 is an alkyl, R4 is a alkyl-aryl.

See schemes IV, V, VI and I in the specifications which show a process of making them.

Claim Rejections - 35 USC § 103

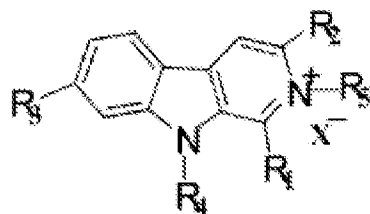
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7-11, 14, 16-24, 37, 38, 40-51, 61-64, 67, 68, 76 rejected under 35 U.S.C. 103(a) as being unpatentable over BE 612725 Fredrick Leonard.

Applicants claims are drawn to compounds of the formula

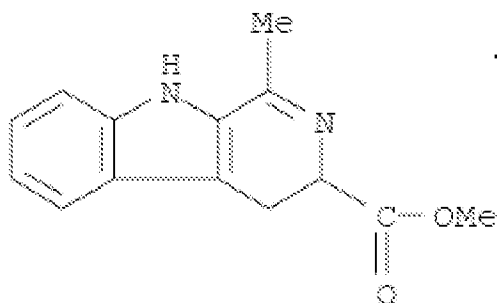
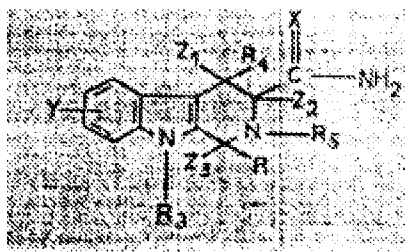
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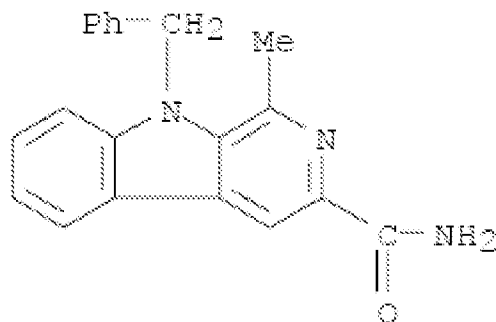
, R5 is H , X is absent , R2 is a an
carboxyl , ester, carboxylate, acyl amino or a linear or branched C1-6 alkyl.

Scope & Content of Prior Art MPEP 2141.01

The prior art teaches a genus which encompasses and is similar to the compounds of the invention.



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Difference between Prior Art and the claims MPEP 2141.02

The difference is that it teaches a genus and a few species, but not all.

Prima Facie Obviousness , Rational and Motivation MPEP 2142-2413

The reference teaches the equivalency of the compounds having a carboxy group at the R2 position and other groups are the R1 and R4. The compounds of the prior art are very similar to Harmine which already is known to have anti-tumor activity. So since these compounds have a very similar structure as Harmine, one of skill in the art would have been motivated to make slight modifications as given by the genus of the prior art and make new compounds.

The claims are rejected further in view of Ishida Junko et al cited in the IDS

Which further discloses similar analogs of Harmine as antitumor agents.

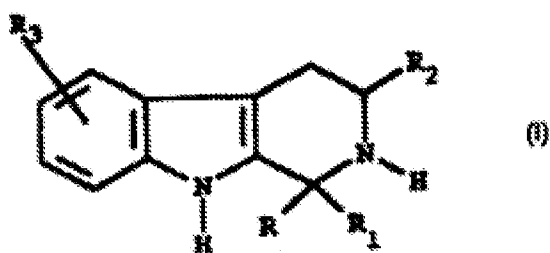
See page 3330. It discloses substituents on its 7 position (corresponding tot the R3 of applicants compounds). See compounds 24, 25.

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So similar compounds with substituents at the 7 position, R₃ of the applicants compounds would be an obvious modification to make for a person of skill in the art.

The claims are rejected further in view of WO 97/37658 Spinell et al. cited in the IDS

It discloses compounds for the same use of the formula



The difference is in the alkylaryl group R₄, the prior art has a H instead.

Federick Leonard discloses similar compounds with the benzyl group as the R₄.

Motivating a person of skill in the same art as drug design to modify their compounds replacing the H with a benzyl group and expect it to retain its properties.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1, 3-5, 7-11, 14, 16-24, 37, 38, 40-51, 61-64, 67, 68, 76 are rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are drawn to compounds with a + charge on the N and with H attached to it.

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Yet none of the examples in applicants' specification has made it.

The compounds with the H for R5 do not have double bonds. See compound 10B .

Applicants' claim shows a charge of +1 , yet table 34 on page 89 has compounds with N having 4 bonds and no charge.

Clarification is required.

Conclusion

Claims 1, 3-5, 7-11, 14, 16-24, 37, 38, 40-51, 61-64, 67, 68, 76 stand rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita J. Desai whose telephone number is 571-272-0684. The examiner can normally be reached on Monday - Friday, flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Rita J. Desai/
Primary Examiner, Art Unit 1625

June 29, 2010.